

## CLAIMS

What is claimed as new and desired to be protected by Letters Patent of the United States is:

1. A method of handling an electronic mail ("e-mail") message, comprising:
  - a) at a sender's side, providing to a service a request comprising information regarding the e-mail message;
  - b) at the service,
    - b1) processing at least a portion of the request to determine a result; and
    - b2) providing the result to the sender's side;
  - c) at the sender's side,
    - c1) incorporating the result into the e-mail message, and
    - c2) transmitting the result-incorporated e-mail message via an e-mail system;
  - d) at the receiver's side,
    - d1) receiving an e-mail message which is nominally the result-incorporated e-mail message;
    - d2) processing the received result-incorporated e-mail message to assess the integrity of the e-mail message.

2. The method of claim 1, wherein:
  - the step of processing at least a portion of the request to determine a result includes generating a digital signature based on the portion of the request;
  - the result includes the digital signature; and
  - the step of processing the received result-incorporated e-mail

message includes processing the digital signature.

3. The method of claim 2, wherein:

the step of generating the digital signature includes performing a public/private key encryption of the portion of the request to generate the digital signature; and

the step of processing the digital signature includes performing a public/private key decryption of the digital signature.

4. The method of claim 1, further comprising:

determining whether the e-mail message which is nominally the result-incorporated e-mail message is actually a result-incorporated e-mail message;

if the e-mail message is not actually a result-incorporated e-mail message, performing a first particular action.

5. The method of claim 1, further comprising:

performing a particular action based on an outcome of assessing the integrity of the e-mail message.

6. The method of claim 5, wherein:

the particular action includes displaying an indication of the outcome of assessing the integrity of the e-mail message.

7. The method of claim 5, wherein:

the particular action includes organizing an e-mail inbox associated with the receiver based on the determination.

8. The method of claim 1, wherein:

the result includes an indication of a level of certification; and  
the integrity is assessed in view of the indication of the level of certification.

9. The method of claim 1, wherein:

the result includes an indication of a level of certification; and  
the step of processing the received result-incorporated e-mail message to assess the integrity of the e-mail message includes processing the result to determine the level of certification.

10. The method of claim 9, further comprising:

at the receiver's side, filtering the e-mail message based on the determined level of certification.

11. The method of claim 1, wherein:

the step of generating the digital signature, at the service, includes encrypting the portion of the request according to a public/private key encryption scheme to generate the digital signature; and

the step of processing the digital signature, at the receiver's side, includes decrypting the digital signature according to the public/private key encryption scheme.

12. The method of claim 1, wherein:

the request further comprises sender verification information; and  
the method further comprises  
at the service, processing the sender verification information.

13. The method of claim 1, wherein:

the request includes a digest of the message body.

14. The method of claim 13, wherein:

the request does not include the message body or information from which the message body can be derived.

15. The method of claim 13, wherein:

the digest of the message is generated, at the sender's side, using an SHA algorithm.

16. The method of claim 13, wherein:

the step of processing the received result-incorporated e-mail message to assess the integrity of the e-mail message includes:

deriving the portion of the request from which the result was determined;

processing the portion of the request and the received e-mail message to assess the integrity of the e-mail message.

17. The method of claim 16, wherein:

deriving the portion of the request from which the result was determined includes processing the result using a decryption algorithm to generate a decrypted result;

processing the portion of the request and the received e-mail message to assess the integrity of the e-mail message includes

generating a digest of the message body and processing the generated digest and the decrypted result to assess the integrity of the e-mail

message.

18. The method of claim 17, wherein:

using a decryption algorithm to generate a decrypted result  
includes processing the result according to a public/private key decryption  
algorithm.

19. The method of claim 1, wherein:

at the sender's side, the result is incorporated into the message by  
including the result in a header associated with the message.

20. The method of claim 19, wherein:

the message is formatted according to an SMTP; and  
the header associated with the message is an SMTP header.

21. The method of claim 1, wherein:

a sender is nominally associated with the sender's side; and  
the method further comprises:

at the service, associating a physical location with the  
sender.

22. The method of claim 1, wherein:

a sender is nominally associated with the sender's side; and  
the method further comprises:

at the service, determining how the sender may be later  
located.

23. The method of claim 22, wherein:

determining how the sender may be later located includes associating a degree of certainty with the determination.

24. The method of claim 23, wherein:  
the result includes an indication of the degree of certainty.

25. The method of claim 1, further comprising:  
at the service, before transmitting the result to the sender's side,  
receiving from the sender an indication of agreement to terms of use of the  
service.

26. The method of claim 25, wherein:  
the indication of agreement to terms of use of the service received  
from the sender as part of an initial subscription by the sender to the service.

27. The method of claim 1, wherein:  
the sender's side is nominally associated with a particular e-mail  
address of a plurality of e-mail addresses; and  
the method further comprises:  
at the service, before transmitting the result to the sender's  
side, sending an inquiry e-mail message to the particular e-mail address; and  
at the service, observing behavior of the sender associated  
with the inquiry e-mail message.

28. The method of claim 27, wherein:  
the behavior of the sender associated with the inquiry e-mail  
message includes the sender sending an e-mail message to the service in reply to  
the inquiry e-mail message.

29. The method of claim 27, wherein:

the behavior of the sender associated with the inquiry e-mail message includes following instructions set forth in the inquiry e-mail message.

30. The method of claim 29, wherein:

the instructions include instruction to link to a particular universal resource locator.

31. The method of claim 1, further comprising:

at the service, before transmitting to the sender's side the request comprising information regarding the e-mail message, receiving a request for the sender to subscribe to the service;

at the service, sending an inquiry message to a sender associated with the sender's side, by a transmission channel other than the electronic mail system; and

at the service, observing behavior associated with the inquiry message.

32. The method of claim 31, wherein:

the transmission channel includes a hardcopy delivery service.

33. The method of claim 32, wherein:

the hardcopy delivery service includes a mail service or similar courier service.

34. The method of claim 33, wherein:

the mail service or similar courier service requires signature of the

sender.

35. The method of claim 1, wherein:

the request includes an indication of an e-mail address associated with the sender, an indication of an e-mail address associated with the recipient, and a digest of a body of the e-mail message; and

processing at least a portion of the request to determine the result includes encrypting the request to determine the result.

36. The method of claim 1, wherein:

at the receiver's side, processing the received result-incorporated e-mail message to assess the integrity of the e-mail message is without interacting with the service.

37. The method of claim 36, wherein:

at the service, processing at least a portion of the request to determine a result includes encrypting the portion of the request using a private key, according to a public/private key encryption scheme; and

at the receiver's side, processing the received result-incorporated e-mail message includes decrypting the result using the public key.

38. The method of claim 1, further comprising:

at the service,

processing at least a portion of the request to generate a secondary result; and

providing an indication of the secondary result to the sender's side.

39. The method of claim 38, further comprising:  
at the sender's side, performing a particular action based on the  
secondary result.

40. The method of claim 38, wherein:  
the indication of the secondary result is an indication that the e-  
mail message was generated as the result of a virus.

41. The method of claim 38, further comprising:  
at the service,  
processing at least a portion of the request to generate a  
secondary result; and  
performing a particular action based on the secondary  
result.

42. The method of claim 41, wherein:  
the particular action includes not determining the result.

43. The method of claim 41, wherein:  
the particular action includes not providing the result to the  
sender's side.

44. The method of claim 1, further comprising:  
at the service,  
for a plurality of e-mails provided from the sender's side,  
determining a collective characteristic of the plurality of e-mails.

45. The method of claim 44, further comprising:

at the service,  
performing a particular action based on the determined  
collective characteristic.

46. The method of claim 45, wherein:  
the particular action performed at the service based on the  
determined collective characteristic includes not providing the result.

47. The method of claim 1, further comprising:  
at the receiver's side, processing a request from the receiver to  
obtain contact information about the sender from the service; and  
at the service, providing the requested contact information about  
the sender to the receiver's side.

48. The method of claim 47, wherein:  
the requested contact information about the sender provided from  
the service to the receiver's side is in a format appropriate to an e-mail client  
program used by the receiver's side.

49. The method of claim 47, wherein:  
the requested contact information includes at least one link to  
advertising information relative to the sender.